

HQMC
14 Mar 1994

ERRATUM

to

MCO 3430.5A

POLICY FOR COMMAND AND CONTROL WARFARE (C2W)

1. Enclosures (1) through (3) were erroneously dropped during processing for printing. Add the attached enclosures (1) through (3) to the basic Order.

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DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, DC 20380-0001

MCO 3430.5A
PLN
14 MAR 94

MARINE CORPS ORDER 3430.5A W/ERRATUM

From: Commandant of the Marine Corps
To: Distribution List

Subj: POLICY FOR COMMAND AND CONTROL WARFARE (C2W) 94

Ref: (a) CJCS MOP 30 of 8 Mar 93 (NOTAL)
(b) CJCS MOP 6 of 3 Mar 93 (NOTAL)
(c) DoDDir TS-3600.1 of 21 Dec 92 (NOTAL)
(d) MCO 3900.15
(e) FMFM 3

Encl: (1) Command and Control Warfare Responsibilities
(2) Command and Control Warfare References
(3) Command and Control Warfare Terminology

1. Purpose. To promulgate policy, guidance and organizational relationships for C2W.

2. Cancellation. MCO 3430.5.

3. Background

a. Reference (a) promulgated new policy for Command and Control Warfare (C2W); previously known as Command, Control and Communications Countermeasures (C3CM). It redefines the focus of C3CM toward warfighting; creating C2W. C2W is the integrated use of Operations Security (OPSEC), Military Deception, Psychological Operations (PSYOP), Electronic Warfare (EW) and Physical Destruction, mutually supported by intelligence, to deny information to, influence, degrade or destroy adversary Command and Control (C2) capabilities, while protecting friendly C2 capabilities against such actions. C2W applies across the operational continuum and all levels of conflict. Reference (a) also clarifies responsibilities for C2W. Chief among these responsibilities are:

- (1) Joint C2W coordination and support;
- (2) Integration of C2W by the CinC's into operation plans, orders and exercises;
- (3) Requires the Director of the Defense Intelligence Agency (DIA) to establish and maintain the Department of Defense (DoD) wide plan and architecture for integrated intelligence support to C2W, and to ensure the Military Intelligence Integrated Data System/Integrated Data Base (MIIDS/IDB) is the DoD standard data base for C2W intelligence support.

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b. Reference (b) promulgated new policy for Electronic Warfare (EW). EW is a major functional component of C2W. EW may support other C2 requirements to collect information, or may, itself be regarded as a major action used to directly attack an enemy's C2 or the enemy's C2 forces in general.

c. Reference (c) established policy and assigned responsibilities for Information Warfare (IW) on the battlefield and integrates physical destruction. Discussion of IW herein is at the unclassified level.

d. Reference (d) established the Combat Development Process (CDP) employed by the Marine Corps to identify, obtain, and support necessary combat capabilities.

e. Reference (e) presented the philosophical underpinning of Marine Corps Command and Control and the fundamental concepts that govern its application. It is the Marine Corps capstone doctrinal publication for C2 and provides an overall framework in which to view C2W in Marine Air Ground Task Force (MAGTF) combined arms operations.

4. Discussion

a. C2W is the military strategy used by the commander to realize the operative effects of IW on the battlefield. IW is the use of information in support of national security strategy to rapidly seize and maintain a decisive advantage by attacking an adversary's information infrastructure through exploitation, denial and influence, while protecting friendly information systems. IW is implemented in national military strategy by C2W. IW can be regarded as an element of national military strategy, while C2W is the operational and tactical execution of IW. The underlying rationale for this strategy evolves from the following:

(1) Commanders of military forces are dependent on the timely flow and processing of information for the effective generation and application of combat power.

(2) This dependence on C2 and information creates a vulnerability to counter-C2 for both friendly and adversary forces. (See Terminology enclosure).

(3) Relative friendly combat power can be significantly enhanced by effective C2W.

b. The integrated employment of counter-C2 and C2-protection is the essence of the C2W strategy.

(1) Effective counter-C2 can be realized through various forms of attack. The fundamental approaches to counter-C2 are destruction, disruption, deception, degradation, and the denial of information. These approaches generally correlate to the principle functions within the definition of C2W.

(2) Effective C2-protection can be attained through the same functions as counter-C2 since both are valid for nullifying adversary counter-C2.

(3) Maximum effectiveness of the C2W strategy is accomplished through the integrated employment of C2-protection and counter-C2 with maneuver, firepower, and sustainment.

c. Intelligence support of C2W must function as an integrated process. This support includes the consolidation of compartmented and all-source and multi-source intelligence data, that is essential to operational planning and execution of both counter-C2 and C2-protection actions. Intelligence preparation and continuous coordination will include:

(1) Establishment and maintenance of the required MIIDS/IDB and other applicable intelligence data bases on enemy C2W and supporting capabilities.

(2) Collection, production, and dissemination capabilities and procedures in support of C2W.

(3) Adequate all-source feedback of enemy reactions to C2W.

(4) The safeguarding of friendly intelligence organizations to ensure they are not misled or disrupted by friendly C2W or by adversary reactions to friendly C2W.

(5) Improved integration of compartmented intelligence capabilities. This includes the release, with proper authority, of compartmented intelligence information for use at non-compartmented levels in support of operational planners and commanders. When commanders require compartmented intelligence data that cannot be released at non-compartmented levels, action should be taken by the intelligence organization and the commander to provide compartmented accesses to persons designated by the commander.

d. Commanders in Chief (CinC) and Joint Force Commanders (JFC) are responsible for joint coordination and execution of C2W. When the Marine Corps is assigned as a Service component of a joint force, the CinC and the JFC expect Marine Corps forces to support joint C2W operations and implement C2W actions applicable to Marine Corps forces.

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5. Policy

a. The objective of the Marine Corps C2W program is to provide policy, concept, doctrine, training, equipment requirements and procurement, to the Fleet Marine Force (FMF) toward developing a MAGTF that can effectively conduct C2W when assigned to combatant commands, fleets, or operating independently. Specifically:

(1) Headquarters Marine Corps (HQMC/PP&O) will provide C2W policy and guidance.

(2) Marine Corps Combat Development Command (MCCDC) will develop C2W concepts, doctrine, requirements, training and education.

(3) Marine Corps Systems Command (MARCORSYSCOM) will develop, field, and provide for training and maintenance of C2W equipment.

(4) Commanders will conduct training and operations to ensure C2W tactical and procedural expertise.

b. C2W is a command responsibility. C2W will be integrated into the combined arms strategy under the staff cognizance of the G-3/S-3 to-comply with Marine Corps and joint policy. Commanders will initiate and execute a dynamic C2W program. C2W concepts will be employed in planning exercises and deployments to test C2W readiness, planning and training objectives. C2W training includes specialized training as well as the indoctrination, planning, and training required by staffs and commanders.

c. C2W training will be provided at formal schools (e.g., The Basic School, Communication Officers School, Amphibious Warfare School, Command and Staff College, School of Advanced Warfighting, Marine Corps War College, Landing Force Training Commands, Navy and Marine Corps Intelligence Training Center, and the Armed Forces Staff College's Joint C2W Staff Course). At a minimum training will include:

(1) Basic C2W terminology.

(2) Examples of topical/potential C2W threats.

(3) Marine Corps C2W capabilities.

(4) Joint Force C2W capabilities.

(5) Employment of C2W and C2W techniques.

(6) Integration of the C2W strategy with maneuver, firepower, and sustainment in combined arms operations within campaign plans.

d. Training programs will provide an awareness of the impact that both enemy and friendly C2W operations may have throughout the battle space, and should exercise specific unit and individual objectives.

e. Commanders will encourage cross-training with other Services and allies. Cross-training will create a mutual understanding of each Service's and nation's C2W capabilities providing invaluable experience in the conduct of joint/combined operations.

f. Commanders will identify and report C2W training deficiencies beyond the capabilities of their command to MCCDC.

g. Commanders will accomplish all C2W training in accordance with local, Service, joint and/or host nation policies.

h. When assigned as a Service component of a joint force, commanders will provide a trained, qualified, and properly equipped C2W Cell to the Joint Commander's Staff. The C2W Cell should be prepared to assist in the planning and execution of those aspects of joint C2W and C2W applicable to Marine forces. The C2W Cell will be comprised of qualified representatives from each of the warfighting and warfighting support disciplines. The Joint Electronic Warfare Center can assist in staffing the C2W Cell on a temporary basis. When assigned as a JFC, Marine commanders will maintain a C2W Cell under the staff cognizance of the J-3, and be prepared to host C2W Cell(s) from assigned forces.

6. Action and Responsibilities. See enclosure (1).

7. References and Terminology. See enclosures (2) and (3) respectively.

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8. Reserve Applicability. This Order is applicable to the Marine Corps Reserve.

A handwritten signature in black ink, appearing to read 'W E Boomer', with a stylized, cursive script.

W. E. BOOMER
Assistant Commandant
of the Marine Corps

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COMMAND AND CONTROL WARFARE RESPONSIBILITIES

1. Headquarters Marine Corps (HQMC)

a. The Deputy Chief of Staff for Plans, Policies and Operations (DC/S PP&O) is responsible for providing overall C2W policy and guidance. The DC/S PP&O:

(1) Acts as the Marine Corps representative to the Office of the Secretary of Defense (OSD), the Joint Chiefs of Staff (JCS)/Joint Staff, the Joint Electronic Warfare Center (JEWEC), the Air Force Information Warfare Center (AFIWC), the other Services, and other agencies regarding C2W policy matters. Acts as the primary point of contact for external policy boards and committees which interface with the Secretary of Defense, the Office of the Joint Chiefs of Staff and other military Services to ensure that Marine Corps C2W matters are-considered in joint and combined actions. Coordinates the assignment of personnel to serve as members or observers of commissions, boards, advisory groups, or committees external to the Marine Corps which require Marine Corps representation on C2W matters. Monitors and participates in liaison between the military Services, Department of Defense, other national agencies and private industry involving the exchange of information pursuant to improving Marine Corps C2W capabilities.

(2) Exercises principal staff cognizance over matters relating to Marine Corps C2W policy. Coordinates with Deputy Chief of Staff for Aviation (DC/S Avn) for aviation systems and Assistant Chief of Staff for Command, Control, Communications, Computer and Intelligence (AC/S C4I) for ground and intelligence systems that support C2W actions. Monitors and reviews Marine Corps C2W policy, programs, doctrine, missions, and concepts of employment. Identifies to other appropriate HQMC staff agencies, the Commanding General, Marine Corps Combat Development Command (CG MCCDC), and the Commander, Marine Corps Systems Command (COMMARCORSSYSCOM) any policy existing that could adversely impact upon C2W systems currently fielded or under development.

(3) Participates in the formulation, review, and evaluation of joint/allied C2W actions/plans.

(4) Establishes Marine Corps C2W objectives, policies, and procedures consistent with DOD Directives, Chairman, Joint Chiefs of Staff Memorandum of Policy (CJCS MOP) 30, and Joint Publications.

(5) Evaluates the Marine Corps C2W posture and the effectiveness of major Marine Corps Commands' C2W programs and provides C2W guidance as required.

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(6) Establishes guidelines for the integration of all elements of C2W as combined arms with fire and maneuver and sustainment within campaign plans for C2W.

(7) Provides HQMC staff assistance to CG MCCDC to serve as the HQMC point of contact regarding the identification, definition, validation, and promulgation of Marine Corps C2W requirements, doctrine, training and education, and other related areas under CG MCCDC's cognizance.

(8) Provides the point of contact and HQMC staff assistance for oversight to COMMARCORSYSCOM regarding research, development, and acquisition activities for current and future Marine Corps C2W systems, to include interoperability with other Service's and Nation's C2W systems.

(9) Serves as the HQMC focal point concerning C2W programs under COMMARCORSYSCOM development in support of planning, programming, and budgeting system (PPBS) requirements. Coordinates with AC/S C4I in the review of applicable PPBS documentation on C2W systems, providing comments and recommendations to CG MCCDC and COMMARCORSYSCOM on the adequacy of those programs with respect to approved Marine Corps C2W requirements. Coordinates PPBS documentation review with DC/S Avn concerning C2W aviation systems under COMMARCORSYSCOM development and AC/S C4I concerning ground C2W systems under COMMARCORSYSCOM development.

(10) Reviews, in coordination with DC/S Avn, AC/S C4I, CG MCCDC, COMMARCORSYSCOM, and other agencies, on documents dealing with the requirement for development, procurement, training, deployment, and life cycle support of Marine Corps C2W systems.

(11) Monitors the operational employment of C2W systems. Coordinates with DC/S Avn, AC/S C4I, and CG MCCDC with respect to determining operational suitability and changes to tactics for C2W systems.

(12) Chairs the C2W Process Action Team (C2WPAT).

b. The AC/S C4I is responsible for intelligence, counter-intelligence, and other related intelligence activities in support of C2W. The AC/S C4I:

(1) Assists DC/S PP&O, DC/S Avn, and other Marine Corps staff agencies in the preparation of training and programs pertinent to intelligence support to C2W.

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(2) Provides threat evaluation of foreign intelligence and C2W organizations.

(3) Provides personnel to serve as members or observers of commissions, boards, advisory groups, or committees external to the Marine Corps which require representation from C4I on C2W matters.

(4) Coordinates with COMMARCORSYSCOM for the integration, maintenance, and dissemination of the MIIDS/IDB for C2W systems. Ensures the MIIDS/IDB is the Marine Corps standard for C2W intelligence support data bases. Provides a member to the Marine Corps MIIDS/IDB Functional Control Board.

(5) Provides personnel to serve as members on the C2WPAT.

c. The DC/S Avn will exercise the following C2W-related responsibilities:

(1) Serves as the acquisition sponsor, via the Chief of Naval Operations (N-88), for Navy C2W systems which satisfy the C2W requirements of Marine Corps aviation.

(2) Coordinates with DC/S PP&O, AC/S C4I and CG MCCDC for the initiation of studies concerning Marine Corps aviation C2W capabilities, requirements, and systems.

(3) Prepares and assists in the review of operational requirements and required operational capabilities dealing with Marine Corps aviation C2W systems.

(4) Monitors the operational employment of aviation C2W systems to determine operational suitability, requirements for systems upgrades, and changes to tactics. Reviews applicable PPBS documentation on aviation C2W systems and provides comments/recommendations to DC/S PP&O, AC/S C4I, CG MCCDC, and COMMARCORSYSCOM on the adequacy of those programs with respect to approved Marine Corps aviation C2W requirements.

(5) Coordinates with DC/S PP&O to provide the following:

(a) Aviation personnel to serve as members of commissions, boards, advisory panels, or committees external to the Marine Corps which require representation from DC/S Avn on aviation C2W matters.

(b) A member to all Study Advisory Committees (SAC), and ad hoc committees which address aviation C2W matters.

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(6) Reviews aviation C2W training and education standards for aviation C2W training and, in coordination with DC/S PP&O, forwards recommendations to CG MCCDC.

(7) Participates with DC/S PP&O and AC/S C4I in the formulation, review, and evaluation of joint/combined C2W actions/plans.

(8) Coordinates with Commander, Naval Air Systems Command (COMNAVAIRSYSCOM) and COMMARCORSYSCOM to ensure that adequate C2W features are incorporated into aviation systems under development.

(9) Coordinates with other HQMC staff agencies, CG MCCDC, and COMMARCORSYSCOM in the development of current and future requirements for training devices/simulators necessary to accomplish C2W training of aviation personnel who will use electronic systems.

(10) Provides personnel to serve as members on the C2WPAT.

d. The Deputy Chief of Staff for Programs and Resources (DC/S P&R) will exercise the following C2W-related responsibilities:

(1) Directs, coordinates, and supervises Marine Corps programming activities within the framework of the PPBS to include Marine Corps C2W requirements in the Department of the Navy (DON) Program Objective Memorandum (POM).

(2) Coordinates Marine Corps C2W requirements to ascertain harmony with the following:

(a) Troop List and Force Structure.

(b) Budget, programming, and resource realities.

(c) Defense Planning Guidance.

(d) Unified Commanders' Integrated Priorities Lists.

(e) Naval/Other Services/Joint/OSD programs.

(3) Reviews selected studies, wargames, exercises, and analyses that pertain to C2W structure, weapon system mixes, and cost effectiveness.

ENCLOSURE (1)

(4) Ensures HQMC staff application of appropriate analytical disciplines in C2W and documentation, program development, and program review.

(5) Represents (from a programming perspective) the Marine Corps C2W program before external agencies: Department of the Navy, OSD, and the Congress. DC/S P&R will be assisted in this effort as necessary by the HQMC staff, CG MCCDC, and COMMARCORSYSCOM.

e. The Deputy Chief of Staff for Manpower and Reserve Affairs (DC/S M&RA) will perform actions as necessary for matters under his functional responsibility to support Marine Corps C2W forces and missions.

f. The Deputy Chief of Staff for Installations and Logistics (DC/S I&L) will exercise the following C2W-related responsibilities:

(1) Coordinates with COMMARCORSYSCOM for the life cycle support of C2W systems being developed for the Marine Corps.

(2) Provides personnel to serve as members or observers of commissions, boards, advisory groups, or committees external to the Marine Corps which require representation from the DC/S I&L on C2W matters.

(3) Incorporates, as appropriate for OPSEC, visual deception, counter-surveillance, and physical security measures in installations and facilities housing C2W systems.

(4) Coordinates with the COMMARCORSYSCOM to:

(a) Develop and publish OPSEC material and design criteria required to incorporate counter-surveillance measures for C2W systems installations.

(b) Establish an OPSEC research and development program to produce techniques, materials and design criteria for C2W system installations that facilitate camouflage, visual deception and counter-surveillance construction.

2. The CG, MCCDC will exercise the following C2W-related responsibilities:

a. Develops, assesses, and publishes C2W operational doctrine, tactics, techniques, studies, concepts, plans, procedures, and requirements.

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b. Conducts mission area analyses for all assigned C2W mission areas. Formulates, programs, and executes the Marine Corps Studies Program. Ensures that C2W strategy is included in appropriate simulations, models, and wargames. Identifies changes to C2W doctrine, training, force structure, and material. Conducts long-term C2W studies and analyses to identify shortfalls and requirements. Ensures C2W lessons learned and mission area analysis items enter the concept-based requirements system.

c. Develops and effects C2W concepts. Examines strategies, operational and tactical C2W issues, and ensures that the C2W strategy is integrated into plans, operations and exercises as a combined arm.

d. Coordinates with other Services, Unified and Specified (U&S) Commands, and Allied Commands in developing joint and combined C2W doctrine.

e. Serves as the MAGTF proponent for all warfighting mission areas. Serves as force structure proponent for all elements of the MAGTF. Identifies C2W mission needs of the MAGTF and establishes requirements for changes to doctrine, training, organization, and equipment. Establishes priorities for acquisition of C2W related equipment through the POM process.

f. Develops requirements and coordinates the staffing of Marine Corps requirements documents and the harmonization of other Service requirements documents. CG MCCDC will ensure that provisions for adequate C2W features are incorporated into required documents for Marine Corps electronics systems.

g. Monitors the progress of COMMARCORSYSCOM in satisfying C2W equipment requirements. Ensures that C2-protection capabilities are included in combat vehicle requirements documents.

h. Establishes and ensures C2W doctrine and concepts are included in appropriate Marine Corps training programs. Ensures that adequate C2W instruction is included in the courses of instruction at The Basic School and Marine Corps Service Schools to include lessons provided through the Marine Corps Institute. CG MCCDC will also identify Military Occupational Specialty (MOS) and billet requirements for C2W instructors to support those programs. Ensures continuous and progressive training for Marine Corps personnel throughout their careers. Ensures that adequate instruction and formal training in all aspects of C2W are incorporated into the curricula and program of instruction of other Service and joint formal schools.

ENCLOSURE (1)

i. Reviews Marine Corps requirements for C2W training equipment. CG MCCDC will also coordinate with the COMMARCORSYSCOM program managers of C2W systems to ensure that the development of training aids, devices, and simulators is included in the basic development plan for C2W systems. CG MCCDC will then provide assistance during the development process. Ensures that adequate C2W training is incorporated into training and exercises conducted by the Marine Corps Air-Ground Combat Center (MCAGCC).

j. Provides personnel to serve as members on the C2WPAT.

3. The COMMARCORSYSCOM will exercise the following C2W-related responsibilities:

a. Conducts research, development, and acquisition activities needed to satisfy requirements validated by CG MCCDC for new or upgraded C2W equipment.

b. Coordinates with DC/S PP&O, AC/S C4I and DC/S Avn to ensure that provisions for adequate C2W features are incorporated into Marine Corps electronic systems under development.

c. Provides the Marine Corps Service Representative to the DIA MIIDS/IDB Functional Control Board (FCB). Establishes the Marine Corps MIIDS/IDB FCB. Provides the Chair to the Marine Corps MIIDS/IDB FCB.

d. Coordinates with AC/S C4I, DIA and the joint intelligence centers for the acquisition, integration, dissemination, and maintenance of the MIIDS/IDB and other C2W related data bases. Coordinates with AC/S C4I to ensure C2W systems integrate and use the MIIDS/IDB as the standard for C2W intelligence support data bases. Ensures that C2W systems using the MIIDS/IDB provide for MIIDS/IDB interoperability between Marine Corps and other Services C2W systems by maintaining the DIA data base elements and data base structure in accordance with the DIA MIIDS/IDB FCB and the Marine Corps MIIDS/IDB FCB.

e. Ensures that combat vehicle developments incorporate, as appropriate for OPSEC, visual deception, counter-surveillance, and physical security measures in installations and facilities housing C2W systems. Coordinates with DC/S I&L to provide for visual deception requirements and life cycle support to C2W systems being developed.

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f. Identifies and evaluates potentially useful new technologies, and advises CG MCCDC of new or improved C2W combat capabilities that may be achievable through the exploitation of those technologies.

g. Provides technical support and other data, as necessary, to CG MCCDC as input for requirements documents.

h. Provides personnel to serve as members on the C2WPAT.

ENCLOSURE (1)

COMMAND AND CONTROL WARFARE REFERENCES

1. Department of Defense Publications

DoD Directive 5-3115.7	Signals Intelligence (SIGINT) (U)
DoD Directive 3222.4	Electronic Warfare (EW) and Command, Control, Communications Countermeasures (C3CM)
DoD Directive TS-3600.1	Information Warfare (U)

2. Joint Publications

Joint Pub 1	Joint Warfare of the U.S. Armed Forces
Joint Pub 1-02	Dictionary of Military and Associated Terms
Joint Pub 2-0	Joint Doctrine for Intelligence Support to Operations
Joint Pub 3-0	Doctrine for Joint Operations
Joint Pub 3-13	Joint Command and Control Warfare (C2W) Operations
Joint Pub 3-51	Electronic Warfare in Joint Military Operations
Joint Pub 3-53	Doctrine for Joint Psychological Operations
Joint Pub 3-54	Joint Doctrine for Operations Security
Joint Pub 3-56	Tactical C2 Planning Guidance and Procedures for Joint Operations
Joint Pub 3-58	Doctrine for Joint Operational Deception
Joint Pub 6-0	Doctrine for Command, Control, Communications and Computers (C4) Systems Support to Joint Operations
CJCS MOP 6	Electronic Warfare
CJCS MOP 30	Command and Control Warfare
CJCS MOP 29	Operations Security
CJCS MOP 116	Military Deception

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3. U.S. Navy Publications

CNO/N64 Space and Electronic Warfare (SEW) Navy
Policy Paper, June 1992

4. U.S. Marine Corps Publications

MCO 3070.2	Operations Security (OPSEC)
MCO 3120.8A	Policy for the Organization of Fleet Marine Forces for Combat
MCO 8240.1	Directed Energy (DE)
FMFM 3	Command and Control
FMFM 3-1	Command and Staff Action
FMFM 3-21	Marine Air-Ground Task Force Intelligence Operations
FMFM 3-23	Signals Intelligence/Electronic Warfare Operations
FMFM 3-27	Aviation Intelligence
FMFM 3-54	Operations Security
FMFM 3-55	Tactical Directed Energy
FMFM 3-55-1	Tactical Directed Energy Technical Information
FMFM 3-57	EW Officers Handbook
FMFM 3-350	Spectrum Management in a Joint Environment
FMFM 7-1	Fire Support Coordination
FMFM 7-12	Electronic Warfare
FMFM 7-13	Military Deception
FMFM 7-33	Psychological Operations
FMFRP 15-5	Electronic Warfare in Combined Arms

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5. U.S. Army Publications

FM 6-20	Fire Support and the Air/Land Battle
FM 3-31	Psychological Operations
FM 34-1	Intelligence and Electronic Warfare Operations
FM 34-130	Intelligence Preparation of the Battlefield

6. U.S. Air Force Publications

AFR 55-50	Command, Control, and Communications Countermeasures (C3CM) Policy
AFR 700-52	Compatibility and Interoperability of Tactical C3 and Intelligence Systems

7. Combined Publications

QSTAG 295	Command and Control of Electronic Warfare
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ENCLOSURE (2)

COMMAND AND CONTROL WARFARE TERMINOLOGY

1. Command and Control (C2). The exercise of authority and direction by a properly designated commander over assigned or attached forces in the accomplishment of the mission. C2 functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. (Joint Pub 1-02)

2. Commander's Critical Information Requirements (CCIR). Information the commander deems critical to prepare the battle space and lead to decisions that generate decisive information that prompt action, creates or identifies vulnerabilities and bring about swift victory. CCIR's are also the commander's tool to focus the C2 organization and the C2 support system to effectively manage the processing, flow, and quality of information.

3. Command and Control (C2) Organization. C2 organization includes all commanders, their staffs, and supporting forces; associated force structure and command relationships; task organization; and battlespace organization and control. Forces are structured, trained, and equipped with the manpower, weapons, mobility, sustainment, and associated resources to support known mission requirements. Forces are task organized to support specific mission requirements; task organization establishes command authority and responsibilities within the force through command relationships. The battle space is structured through standardized techniques and procedures that enhance control and improve freedom of action, while reducing the demand for information.

4. Command and Control Support (C2S). The planned complementary employment of all information related systems, assets, and associated resources such that the flow and processing of information is deliberately controlled to advantage in support of the MAGTF decision and execution cycle. The C2S concept seeks to balance exploitation of the significant human potential for abstract reasoning and logic, with the power of automation, to transport, manipulate, fuse, store and recall information. The principal goal of the C2S concept is to create a common situational awareness that speeds commander's and key personnel's ability to convey and share ideas quickly to enhance unity of effort and tempo of operations.

ENCLOSURE (3)

5. C2S System. An organized assembly of C2S forces or elements task organized and arrayed to overlay the C2 organization with a C2 support system that collects, transports, processes, disseminates, and protects information, as well as supports C2W actions, essential to the commander and subordinate elements in the generation and decisive application of combat power. A C2S system includes C2 facilities, decision support, information exchange, surveillance, and C2S control sub-systems. C2S enables command and control with communications, computers, surveillance, reconnaissance, intelligence, interoperability, C2-protection, and counter-C2 operations, their associated resources, and technology.

6. C2S Forces. The personnel, equipment, facilities, communications, and procedures involved with reconnaissance, surveillance, intelligence, fire support coordination, tactical air control, electronic warfare, automated data processing, sensor management, signals intelligence, deception, space systems, and other information-related areas. Also called C2S forces.

7. Command and Control Warfare (C2W). The integrated use of operations security, military deception, psychological operations, electronic warfare, and physical destruction, supported by intelligence, to deny information to, influence, degrade, or destroy adversary command and control capabilities and to protect friendly command and control against such actions. Also called C2W. There are two divisions within C2W:

a. Counter-C2. That division of C2W comprising measures taken to deny adversary commanders and other decision-makers the ability to command and control their forces effectively.

b. C2-Protection. That division of C2W comprising measures taken to maintain the effectiveness of friendly C2 despite both adversary and friendly counter-C2 actions. (CJCS MOP 30; proposed for inclusion in Joint Pub 1-02)

8. C2W Actions. The use of lethal and non-lethal means to attack and destroy or degrade enemy C2 while protecting friendly C2. C2W actions include the integrated use of Operations Security (OPSEC), Military Deception, Psychological Operations (PSYOP), Electronic Warfare (EW), and physical destruction, mutually supported by intelligence, to deny information to, influence, degrade, or destroy adversary command and control capabilities, while protecting friendly command and control capabilities against such actions.

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9. Decisive Information. Guidance, directives, orders, or any other type of authoritative information that has been generated by the commander or his staff. It is the result of processed information that includes command decisions and/or judgements of the commander designed to influence specific actions.

10. Directed Energy. An umbrella term covering technologies that relate to the production of a beam of concentrated electromagnetic energy or atomic or subatomic particles. Also called DE. (Joint Pub 1-02)

11. Electronic Warfare. Military action involving: (1) the use of electromagnetic or directed energy to attack an enemy's combat capability; (2) protection of friendly combat capabilities against undesirable effects of friendly or enemy use of the electromagnetic spectrum warfare or surveillance of the electromagnetic spectrum for immediate threat recognition in support of electronic warfare operations and other tactical actions such as threat avoidance, targeting, and homing. Also called EW. There are three divisions within electronic warfare: Electronic Attack (EA), Electronic Protection (EP), and Electronic Warfare Support (ES).

a. Electronic Attack. That division of electronic warfare involving the use of electromagnetic or directed energy to attack personnel, facilities, and/or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability. Also called EA. EA includes: 1) actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum, such as jamming and electromagnetic deception; 2) employment of weapons that either use electromagnetic or directed energy as their primary destructive mechanism (lasers, particle beams) or use an enemy source of electromagnetic energy as their primary means of terminal guidance, for the purpose of damaging or destroying personnel, facilities, or equipment.

(1) Electromagnetic Jamming. The deliberate radiation, re-radiation, or reflection of electromagnetic energy for the purpose of preventing or reducing an enemy's effective use of the electromagnetic spectrum, and with the intent of degrading or neutralizing the enemy's combat capability. As used in this order, jamming includes the use of flares, chaff, and corner reflectors, since these devices radiate or reflect electromagnetic energy.

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(2) Electromagnetic Deception. The deliberate radiation, re-radiation, alteration, suppression, absorption, denial, enhancement, or reflection of electromagnetic energy in a manner intended to convey misleading information to an enemy or to enemy electromagnetic-dependent weapons, thereby degrading or neutralizing the enemy's combat capability. Among the types of electromagnetic deception are:

(a) Manipulative Electromagnetic Deception. Actions to eliminate revealing, or convey misleading, electromagnetic telltale indicators that may be used by hostile forces.

(b) Simulative Electromagnetic Deception. Actions to represent friendly notional or actual capabilities to mislead hostile forces.

(c) Imitative Electromagnetic Deception. The introduction of electromagnetic energy into enemy systems that imitates enemy emissions.

b. Electronic Protection. That division of electronic warfare involving actions taken to protect personnel, facilities, and equipment from any effects of friendly or enemy employment of electronic warfare that degrade, neutralize, or destroy friendly combat capability. Also called EP.

c. Electronic Warfare Support. That division of electronic warfare involving actions tasked by, or under direct control of, an operational commander to search for, intercept, identify, and locate sources of radiated electromagnetic energy for the purpose of immediate threat recognition. Electronic warfare support provides information required for immediate use by an operational commander's decisions involving electronic warfare operations and other tactical actions such as threat avoidance, targeting, and homing. Also called ES. Electronic warfare support data can be used to produce signals intelligence (SIGINT), both communications intelligence (COMINT) and electronics intelligence (ELINT) (CJCS MOP 6)

12. Emission Control. The selective and controlled use of electromagnetic, acoustic, or other emitters to optimize command and control capabilities while minimizing, for operations security (OPSEC), detection by enemy sensors; to minimize mutual interference among friendly systems; and/or to execute a military deception plan. Also called EMCON. (Joint Pub 1-02)

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13. Frequency Deconfliction. A systematic management procedure to coordinate the use of the electromagnetic spectrum for operations, communications, and intelligence functions.

14. Implementation of the C2W Strategy. A process which determines the requirements for and develops a plan to integrate C2W actions into the overall concept of operations.

15. Information. Information is symbols (e.g., numbers, letters, words, graphics, visual images, sounds, smells, or physical contact) whether they represent something concrete or abstract, that give visualization or convey a thought. A given symbol, or piece of information, may be meaningless by itself. However, combining pieces of information produces ideas or provides knowledge. When ideas are structured into logical patterns they produce concepts or frameworks from which plans formed and, ultimately, information is managed. There are basically two sources of information, original and existing:

a. Original Information Source. Original sources are the first witnesses to the information, be it a human or automated observation or the intellectual creation of an idea.

b. Existing Information Source. Existing sources of information are already stored in some type of medium; for example, a book, microform, a computer, or someone's brain.

16. Information Warfare (U). Information Warfare is the use of information in support of national security strategy to rapidly seize and maintain a decisive advantage by attacking an adversary's information infrastructure through exploitation, denial and influence, while protecting friendly information systems. Information Warfare is implemented in national military strategy by C2W.

17. Management of C2 Information. A process aimed at attaining timely critical information to support decision making and dissemination of decisive information to the right place, at the right time, and in a form that influences appropriate action. Information management is based on principles that govern its quality and flow throughout the cycle of collecting, transporting, processing, disseminating, and protecting information.

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18. Military Deception. Actions executed to mislead foreign decision-makers, causing them to derive and accept desired appreciations of military capabilities, intentions, operations, or other activities that evoke foreign actions that contribute to the originator's objectives. There are three categories of military deception:

a. Strategic Military Deception. Military deception planned and executed to result in foreign national policies and actions which support the originator's national objectives, policies, and strategic military plans. (FMFM 7-13)

b. Tactical Military Deception. Military deception planned and executed by and in support of operational commanders against the pertinent threat, to result in opposing operational actions favorable to the originator's plans and operations. (FMFM 7-13)

c. Department/Service Military Deception. Military deception planned and executed by Military Services about military systems, doctrine, tactics, techniques, personnel or service operations, or other activities to result in foreign actions which increase or maintain the originator's capabilities relative to adversaries. (Joint Pub 1-02)

19. Nondestructive Electronic Warfare. Those EW actions, not including employment of Wartime Reserve Modes (WARM), that deny, disrupt, or deceive rather than damage or destroy. (CJCS MOP 6)

20. Operations Security. A process of analyzing friendly actions attendant to military operations and other activities to:

a. Identify those actions that can be observed by adversary intelligence systems.

b. Determine indicators hostile intelligence systems might obtain that could be interpreted or pieced together to derive critical information in time to be useful to adversaries.

c. Select and execute measures that eliminate or reduce to an acceptable level the vulnerabilities of friendly actions to adversary exploitation. Also called OPSEC. (Joint Pub 1-02)

21. Signals Intelligence. A category of intelligence information comprising either individually or in combination all communications intelligence, electronics intelligence, and foreign instrumentation signals intelligence, however transmitted. Also called SIGINT. (Joint Pub 1-02)

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a. Communications Intelligence. Technical and intelligence information derived from foreign communications by other than the intended recipients. Also called COMINT. (Joint Pub 1-02)

b. Electronics Intelligence. Technical and intelligence information derived from foreign non-communications electromagnetic radiations emanating from other than nuclear detonations or radioactive sources. Also called ELINT. (Joint Pub 1-02)

c. Foreign Instrumentation Signals Intelligence. Technical information and intelligence information derived from the intercept of foreign instrumentation signals by other than the intended recipients. Note: Foreign instrumentation signals include but are not limited to signals from telemetry, beaconry, electronic interrogators, tracking/fusing/arming/firing commando systems, and video data links. Also called FISINT.

22. Spectrum Management. Planning, coordinating, and managing joint use of the electromagnetic spectrum through operational, engineering, and administrative procedures, with the objective of enabling electronic systems to perform their functions in the intended environment without causing or suffering unacceptable interference. (CJCS MOP 6)

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